

**REMARKS**

Claims 1-8, 17-18 and 20-21, 23 and 25 are rejected in the Office action as anticipated by US 3051639 of Anderson.

The view is taken that patentable weight cannot be given to the recitation of a reactor for the production of nanoparticles because the recitation occurs in the preamble. Claims 17-19 are amended to positively recite the production of nanoparticles in the body of the claims.

The Examiner is respectfully requested to note that in Claim 1, the particle withdrawn from the quench zone is defined as a nanoparticle.

Accordingly, the instant claims are not anticipated by the Anderson patent.

Claims are additionally rejected as obvious in view of Anderson.

The view is taken in the Office action that the intended use to form nanoparticles does not result in a nonobvious structural difference between the claims and the Anderson patent.

However, independent claims 1 and 17-19 each specifically recite the production of nanoparticles which results from the interaction of the spacer zone structure and the homogenization zone structure of the reaction chamber. Anderson does not teach a spacer zone as recited in the instant claims having a length  $L_1$  which is of sufficient length for the hot carrier gas to attach to the wall of the spacer zone of the reaction chamber prior to the reactant inlets. Anderson merely shows fluid hydrocarbon inlet 48 of Fig 1 located above a cylindrical reaction chamber, the inlets are pointed upwards towards the gas stream. Nothing is disclosed in Anderson about the dimensions of any lengths of the reaction chamber and since Anderson does not relate to the production of nanoparticles, nothing in Anderson would have disclosed or suggested the relevance of the lengths of a spacer zone and a homogenization zone.

Hence, contrary to the comment in the Office action, the structural aspects of the claimed spacer zone and homogenization zone which are not taught or described in Anderson would not have rendered obvious the instant claims which provide for the production of nanoparticles.

Additionally, claim 19 is directed to a process for producing nanoparticles. Anderson is silent on the production of nanoparticles and fails to teach or suggest the claimed spacer zone and homogenization zone. Accordingly, claim 19 would not have been obvious in view of Anderson.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,

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